DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: TROUT POND

Town: LYME

County: Grafton

River Basin: Connecticut
Latitude: 43°49'33" N

Longitude: 72°05'27" W

Elevation (ft): 1197

Shore length (m): 1000

Watershed area (ha): 5.50

Maximum depth (m): 12.5

Mean depth (m): 5.5

Volume (m³): 302000

Relative depth: 4.7

Shore configuration: 1.20

Areal water load (m/yr): 14.85

Flushing rate (yr-1): 2.70

Watershed area (ha): 152.8

P retention coeff:: 0.51

% watershed ponded: 0.0

Lake type: natural

BIOLOGICAL:	14 February 1995	10 August 1994
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 60%	OSCILLATORIA 50%
#2	ASTERIONELLA 40%	ASTERIONELLA 35%
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		5.81
DOM. ZOOPLANKTON (% TOTAL) #1	ROUND CILIATE SPP. 47%	KELLICOTTIA 42%
#2	POLYARTHRA 18%	NAUPLIUS LARVA 19%
#3	KERATELLA 17%	KERATELLA 18%
ROTIFERS/LITER	58	114
MICROCRUSTACEA/LITER	17	49
ZOOPLANKTON ABUNDANCE (#/L)	146	171
VASCULAR PLANT ABUNDANCE		Sparse
SECCHI DISK TRANSPARENCY (m)		1.6
BOTTOM DISSOLVED OXYGEN (mg/L)	5.9	0.5
BACTERIA (E. coli, #/100 ml) #1		
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 3.7 Hypolimnion volume (m^3) : 83000 Anoxic volume (m^3) : 30000

CHEMICAL:		Lake: Town:	TROUT POR	ND	
	14 February 1995		10 August 199		94
DEPTH (m)	4.0	8.0	1.0	4.0	9.0
pH (units)	6.4	6.5	7.0	6.4	6.2
A.N.C. (Alkalinity)	7.7	8.6	8.5	6.1	7.9
NITRATE NITROGEN	0.05	0.07	0.05		0.09
TOTAL KJELDAHL NITROGEN	0.22	0.25	0.50	0.40	0.44
TOTAL PHOSPHORUS	0.006	0.006	0.017	0.016	0.014
CONDUCTIVITY (µmhos/cm)	34.2	34.4	33.5	31.7	37.3
APPARENT COLOR (cpu)	42	42	60	38	38
MAGNESIUM			0.51		,
CALCIUM			4.4		
SODIUM			0.8		
POTASSIUM			0.52		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	6	6	4		5
TN : TP	45	53	32		38

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

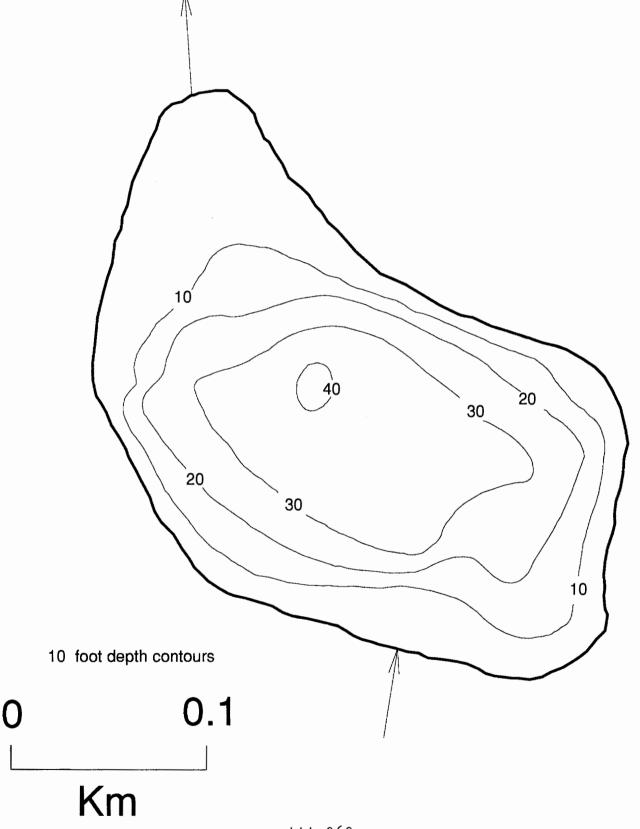
CALCITE SATURATION INDEX

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
6	4	0	1	11	Meso.

COMMENTS:

- 1. This is a somewhat remote pond (.5 mile hike) that was sampled cooperatively with the NH Fish and Game Department. It is also sampled regularly by helicopter as part of the Acid Rain Remote Ponds program. It is not an acid pond but had one of the highest levels of mercury in brook trout collected to date (.6 mg/kg). The brook trout from Trout Pond were among the largest collected to date, which probably accounts for the elevated mercury levels.
- 2. Interestingly, the highest color value in the summer was in the surface layer, suggesting surface runoff from watershed marshes.

Trout Pond Lyme



FIELD DATA SHEET

LAKE: TROUT POND DATE: 08/10/94

TOWN: LYME

WEATHER: SUNNY & WINDY

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.5	21.5	8.2	92 %
1.0	21.0	8.1	91 %
2.0	19.9	8.1	87 %
3.0	17.2	7.0	72 %
4.0	12.0	7.9	72 %
5.0	8.1	7.9	65 %
6.0	6.0	4.7	37 %
7.0	5.0	3.3	26 %
8.0	4.6	1.5	11 %
9.0	4.0	0.3	2 %
10.0	4.0	0.3	2 %
11.0	4.0	0.3	2 %
12.0	4.0	0.5	4 %

SECCHI DISK (m): 1.6

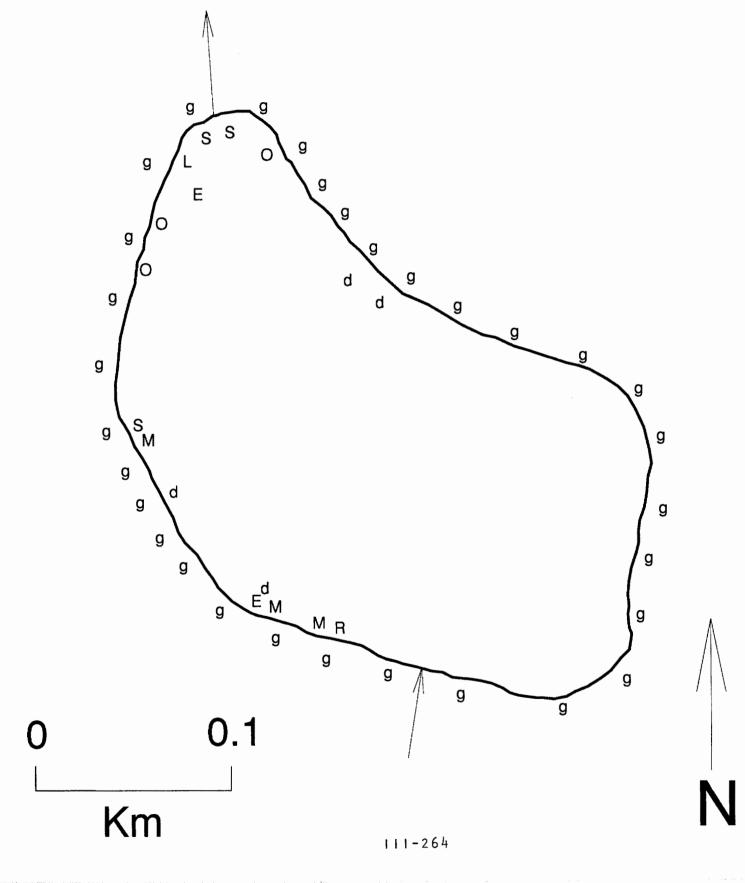
COMMENTS:

BOTTOM DEPTH (m): 12.1

TIME: 1220

*Dissolved oxygen values are in mg/L

Trout Pond Lyme



AQUATIC PLANT SURVEY

LAK	E: TROUT POND	TOWN: LYME	DATE: 08/10/94	
Vor	PLANT	NAME	ABUNDANCE	
Key	GENERIC	COMMON	ABUNDANCE	
d	Dulichium arundinaceum	Three-way sedge	Sparse	
g	Myrica gale	Sweet gale	Common	
E	Eriocaulon septangulare	Pipewort	Sparse	
M	Sphagnum	Peat moss	Sparse	
R	Sarracenia purpurea	Pitcher-plant	Sparse	
0	Cephalanthus occidentalis	Buttonbush	Sparse	
S	Sparganium	Bur reed	Sparse	
L	Spongilla	Freshwater sponge	Sparse	

OVERALL ABUNDANCE: Sparse

GENERAL OBSERVATIONS:

- Sweet gale was common around the entire shoreland. Its abundance was not considered in the overall abundance rating because of its terrestrial nature.
- 2. Despite its near neutral pH the pond supported acid-loving plants such as **Sphagnum** and pitcher plants.